

vocational college

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The shape of this school for medical assistants describes a central atrium that connects a series of compact buildings. These consist of a variety of lecture rooms and laboratories for diverse purposes. The laboratories can be ventilated naturally, but foul air is mechanically exhausted.

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To control glare, the large south oriented window was equipped with an interior, but not with an exterior shading system. The appraisal of occupants showed however, that laboratories considerably overheat during summer.

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Veiling reflections on the blackboard, situated on the rear wall of the room, restrict the clear visibility of it's writings. Despite the large glazing, the 9 m depth of the room requires the use of artificial light. This represents the worst case scenario of a building depending on artificial light because the daylight must be excluded to control glare. Since there are only interior shading devices the room overheats during the summer. The reason for this low performance can be attributed to the architect's design decision to maintain a smooth facade without any exterior shading structures.

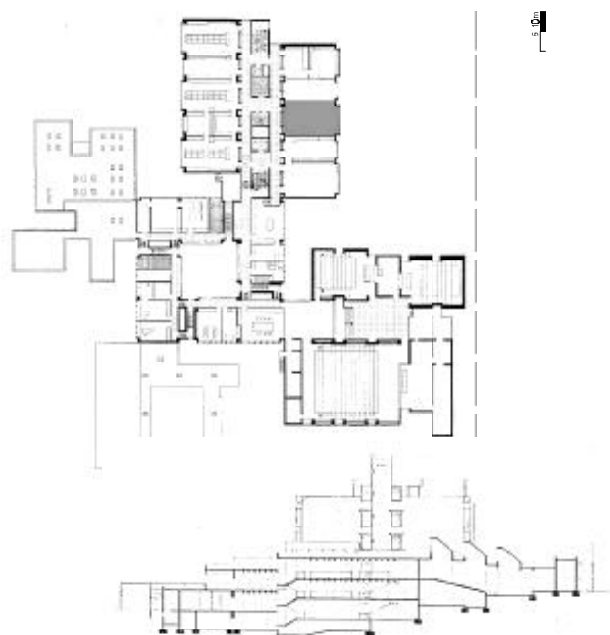
predominantly cloudy



Views through the window are practically unobstructed.



South facade; the windows are flush with the facade.



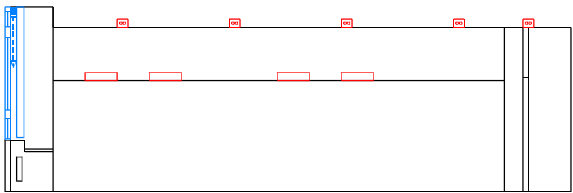
Floorplan and cross-section.



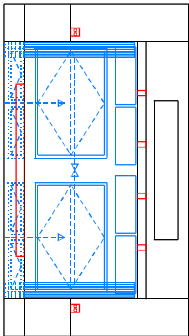
Interior view of the laboratory.



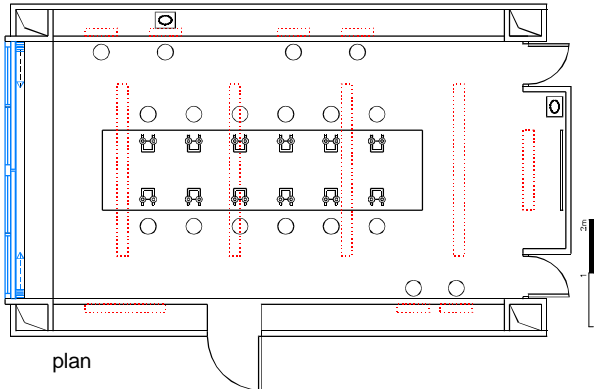
Only interior systems are applied to control glare; the function of the curtain is to darken the room.



cross-section



window wall



plan

### building data

- number of stories 4
- architect G. +M. Hänska
- year of completion 1967

### laboratory

- daylight strategy unilateral, sidelighting
- dimensions (depth/width/height) 9,1 m / 6,0 m / 3,1 m
- room area 54,6 m<sup>2</sup>
- floor linoleum, blue, 10%
- wall plasterboard, white, 47%
- door plastic coating, white, 52%
- ceiling metal lamellas, white, 65%
- laboratory table coated timber, black, 6%
- blackboard coated timber, green, 18%
- jalousie anodized aluminum, white, 80%
- south facing window double, float
- lamp types fluorescent lamps
- installed power density 16 W/m<sup>2</sup>
- control strategy manual switching

facade		south facade	
data	orientation	180°	
	glazed area	8,0 m <sup>2</sup>	
	opening index	0,43	
function	daylighting	●	
	view outside	●	
	ventilation	●	
	operable	●	
	shading	●	
	redirection	-	
function systems		jalousie curtain	
location	sun shading	●	-
	glare protection	●	-
	redirection	□	-
	inside	●	●
	window pane	□	-
location	outside	□	-
	movable	●	●
	fixed	□	-